Moreover, as of April 18, 2001, Verizon PA indicates that there are a total of 169,408 resold access lines that are served by CLECs.[27] Of these lines, there are 40,550 residential and 128,858 business lines.[28] Verizon states that the CLECs are providing service in all four of the density zone cells that make up Verizon PA's territory.[29]

Verizon states that in addition to the previously mentioned 169,408 resold customer access lines, there are more than 174,000 UNE-P lines and, according to E-911 reports, there are more than 547,000 facilities-based lines in Pennsylvania that are provided by CLECs.[30] Verizon PA asserts that through all modes of interconnection, CLECs have captured 13% of the total lines in Verizon PA's territory and that for each of the six months from October 2000 to March 2001, Verizon PA lost to CLECs an average of 45,750 residential access lines per month.[31]

On April 5, 2001, PCTA filed a stipulation that it did not intend to present any evidence in the proceeding contesting Verizon PA's compliance with section 271(c)(1)(a). PCTA, however, qualified that its stipulation should not be construed as an acknowledgement that Verizon PA had met its burden of proof on this issue. PCTA did not produce any additional evidence on this issue in the record.

No other party challenged Verizon-PA's satisfaction of this issue.

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[27] 04/25 Tr. at 15.

[28] Id.

[29] Whelan Supp. Dec. Att. 117

[30] Whelan Supp. Dec. at ¶4.

[31] Whelan Supp. Dec. at ¶4 & Att. 113 &114.

D. Analysis of Evidence

The record establishes that Verizon PA has satisfied the section 271(c)(1)(A) requirement inasmuch as Verizon PA has entered into over 144 interconnection agreements with CLECs (excluding those for wireless service). Specifically, we find that AT&T, MCIW, Corecom, RCN and XO all provide telephone exchange service either exclusively or predominantly over their own facilities to residential subscribers and to business subscribers. This fact was uncontested, therefore, it is concluded that Verizon PA has demonstrated satisfaction of Track A requirements by fulfilling this statutory requirement.

However, in its initial comments, PCTA argued that section 271, as well as the public interest, requires the PAPUC to engage in a detailed inquiry into the status of local competition in Verizon PA's service territory and Verizon PA is required to provide substantial evidence to support its claim that the local market in Verizon PA's service territory has been "irreversibly opened" to competition for both business and residential customers.[32] We believe that Verizon PA has met this burden.

The steadily increasing number of PAPUC-approved CLECs and in the number of facilities-based CLEC access lines clearly demonstrate that, in Pennsylvania, competition in the local telephone market continues to grow at a rapid pace and that the local telephone service market for both residential and business customers is irreversibly open.

The increase in the number of CLECs for which operating authority has been approved is verified by an examination of the PAPUC's docket system. In fact, since Verizon PA reported the number of 47 pending CLEC applications, PAPUC docket entries indicate that the number has increased.

[32] PCTA Comments 02/12/2001 at 6.

Also, Verizon PA's reporting of the number of resold lines is consistent with the data available from Verizon PA's recently filed Annual Access Line Report.[33] In its most recent report, Verizon PA states that as of December 2000, there were 169,408 resold access lines for the provision of service to business and residential customers in the state.

Additionally, the PAPUC compiles an Annual Access Line Summary Report of the number of access lines for all CLECs and ILECs on a statewide basis. This report indicates that there are a total of 609,968 access lines for facilities based-CLECs, and 257,044 access lines categorized as wholesale local loops leased to UNE purchasers. These numbers include lines that are located in non-Verizon PA's territories so understandably they are greater than those estimates reported by Verizon PA. Nonetheless, they do confirm the reasonableness of Verizon's estimates, and the sum of this evidence demonstrates that robust competition exists in the local telephone service market in Pennsylvania.

E. Conclusion

Verizon PA has demonstrated compliance with the statutory requirements of section 271 regarding the presence of interconnection agreements with facilities-based competitors. Accordingly, in order for the FCC to approve its application for entry into the long distance market, Verizon PA must demonstrate that it has also satisfied the requirements in section 271(c)(2)(B) of the TA-96. To do so, Verizon PA must demonstrate that the 14 checklist items are available and, in fact, are being provided to local competitors in Pennsylvania under interconnection agreements, under tariffs that have been filed with the PAPUC, and, in some cases, under tariffs that have been filed with the FCC. These checklist items are discussed individually below.

[33] The report was filed in compliance with a PAPUC order in Pennsylvania Telephone Association's Task Force Petition for Establishment of a Pennsylvania Relay Service for the Deaf, and Hearing and/or Speech Impaired Community, Docket No. M-00900239 (Order entered May 29, 1990).

IV. VERIZON PA COMPLIANCE WITH SECTION 271(C)(2)(B) -- THE COMPETITIVE CHECKLIST

Section 271(c)(2)(B) sets forth 14 checklist items. As part of section 271(c)(2)(B)(2), Verizon PA is required to have a fully functional and non-discriminatory OSS in place to provide service for CLECs. OSS performance is measured in part by metrics. Poor performance on the metrics is addressed in part by remedies. Change management is a significant component of OSS and metrics. OSS, metrics, change management and remedies are applicable to the various checklist items. For a complete description of OSS and change management, see discussion of Checklist item 2. A number of issues related to metrics and remedies will be introduced in other checklist items but more fully resolved in our discussion of metrics and remedies herein.

A. Checklist Item 1 -- Interconnection

1. Description of Checklist Item

Section 271(c)(2)(B)(i) of the competitive checklist requires BOCs to provide "interconnection in accordance with the requirements of sections 251(c)(2) and 252(d)(1)." Section 251(c)(2) imposes upon ILECs the "duty to provide, for the facilities and equipment of any requesting telecommunications carrier, interconnection with the local exchange carrier's network . . . for the transmission and routing of telephone exchange service and exchange access." In the Local Competition First Report and Order, the FCC concluded that the term "interconnection" under section 251(c)(2) refers "only to the physical linking of two networks for the mutual exchange of traffic."[34]

[34] In the Matter of Implementation of the Local Competition Provisions in TA-96, CC Docket No. 96-98, First Report and Order, FCC 96-325 , at ¶ 176 (rel. August 8, 1996). ("Local Competition First Report and Order").

2. Standard of Review

First, the ILEC must provide interconnection at "any technically feasible point within [its] network."[35] Second, an ILEC must provide interconnection that is "at least equal in quality to that provided by the local exchange carrier to itself or . . . [to] any other party to which the carrier provides interconnection."[36] Finally, an ILEC must provide interconnection "on rates, terms and conditions that are just, reasonable and nondiscriminatory, in accordance with the terms and conditions of the agreement and requirements of this section [251] and section 252."[37]

ILECs must also allow competing carriers to choose any method of technically feasible interconnection at a particular point on the ILEC's network.[38] One common means of interconnection is the provisioning of interconnection trunking by the ILEC. In the Local Competition First Report and Order, the FCC concluded that to implement the "equal-in-quality" requirement under section 251, an ILEC must provide interconnection between its network and that of a requesting carrier at "a level of quality that is at least indistinguishable from that which the incumbent provides itself, a subsidiary, an affiliate, or any other party."[39] This duty requires the incumbent to design and to operate its interconnection facilities to meet "the same technical criteria and service standards" that are used for the interoffice trunks within the ILEC's network.[40]

In the Local Competition First Report and Order, the FCC identified trunk group blockage and transmission standards as indicators of an ILEC's technical criteria and

[35] 47 U.S.C. § 251(c)(2)(B); see Local Competition First Report and Order at ¶¶ 204-07.

[36] 47 U.S.C. § 251(c)(2)(C).

[37] 47 U.S.C. § 251(c)(2)(D).

[38] Local Competition First Report and Order at ¶ 549.

[39] Local Competition First Report and Order at ¶ 224; see also 47 C.F.R. 51.305(a)(3).

[40] Id.

service standards.[41] Thus, in prior section 271 applications, the FCC reviewed trunk group blockage data and concluded that disparities in trunk group blockage indicated a failure to provide interconnection to competing carriers "equal-in-quality" to the interconnection the BOC provided to its own retail operations.[42]

Moreover, the FCC examines the percent of the BOCs common final trunk groups exceeding their engineering design and the percent of total CLEC dedicated final trunk groups exceeding the same engineering design.[43] The FCC does such an examination so as to determine whether the RBOC designs and provides interconnection trunks to CLECs using the same technical standard it uses to design its own facilities.

Additionally, the FCC concluded that the requirement to provide interconnection on terms and conditions that are "just, reasonable, and nondiscriminatory" means that an ILEC must provide interconnection to a competitor in a manner no less efficient than the way in which the ILEC provides the comparable function to its own retail operations.[44] The FCC has interpreted this obligation to include, among other things, the ILEC's installation time for interconnection service and its provisioning of two-way trunking

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[41] Local Competition First Report and Order at ¶ 224.

[42] Ameritech Michigan 271 Order at ¶¶ 224-245; Second BellSouth Louisiana 271 Order at ¶77; cf. In the Matter of Application by Bell Atlantic New York for Authorization Under Section 271 of the Communications Act To Provide In-Region, InterLATA Service in the State of New York, CC Docket No. 99-295, Memorandum Opinion and Order, FCC 99-404 at ¶ 69 (rel. December 22, 1999) ("BA NY 271 Order"); In the Matter of Application of Application by SBC Communications Inc., Southwestern Bell Telephone Company, And Southwestern Bell Communications Services, Inc. d/b/a/ Southwestern Bell Long Distance Pursuant to Section 271 of the Telecommunications Act of 1996 To Provide In-Region, InterLATA Services In Texas, CC Docket No. 00-65, Memorandum Opinion and Order, FCC 00-238 at ¶¶ 67-69 (rel. June 30, 2000) ("SWBT Texas 271 Order"); In the Matter of Joint Application of Application by SBC Communications Inc., Southwestern Bell Telephone Company, and Southwestern Bell Communications Services, Inc., d/b/a/ Southwestern Bell Long Distance, for Provision of In-Region, InterLATA Services In Texas, CC Docket No. 00-65, Memorandum Opinion and Order, FCC 00-238 at ¶ 225 (rel. January 22, 2001) ("SWBT Kansas and Oklahoma 271 Order").

[43] BA NY 271 Order at ¶ 69.

[44] Local Competition First Report and Order at ¶ 218.

arrangements.[45] Similarly, repair time for troubles affecting interconnection trunks is useful for determining whether a BOC provides interconnection service under the "terms and conditions that are no less favorable than the terms and conditions" the BOC provides to its own retail operations.[46]

Another common means of interconnection is collocation at the LEC's premises. Section 251(c)(6) of TA-96 imposes upon ILECs "the duty to provide . . . for physical collocation of equipment necessary for interconnection or access to unbundled network elements at premises of the LEC, except that the carrier may provide for virtual collocation if the LEC demonstrates to the State commission that physical collocation is not practical for technical reasons or because of space limitations."[47] Consequently, additional technically feasible methods of interconnection include physical and virtual collocation and meet point arrangements.[48]

In the Advanced Services First Report and Order, the FCC revised its collocation rules to require ILECs to include shared cage and cageless collocation arrangements as part of their physical collocation offerings and set forth various other requirements ILECs must meet in provisioning collocation arrangements.[49]

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[45] BA NY 271 Order at ¶ 70; SWBT Texas 271 Order at ¶¶ 70-71; SWBT Kansas and Oklahoma 271 Order at ¶¶ 226-227; In the Matter of Application of Verizon PA New England Inc., Bell Atlantic Communications, Inc. (d/b/a/ Verizon PA Long distance), NYNEX Long Distance Company (d/b/a Verizon PA Enterprise Solutions) And Verizon PA Global Networks Inc., For Authorization to Provide In-Region, InterLATA Services in Massachusetts, Memorandum Opinion and Order, CC Docket No. 01-9, at ¶ 186-187 (2001) ("Verizon MA 271 Order").

[46] BA NY 271 Order at ¶ 65.

[47] 47 U.S.C. § 251(c)(6).

[48] Local Competition First Report and Order at ¶¶ 212, 550, and 553; 47 C.F.R. § 51.321(b).

[49] In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket No. 98-147, First Report and Order and Further Notice of Proposed Rulemaking, FCC 98-48 (rel. March 31, 1999) at ¶¶ 41-42 ("Advanced Services and Order").

In prior section 271 applications, the FCC has considered the provision of collocation as an essential prerequisite to demonstrating compliance with item 1 of the competitive checklist.[50] To show compliance with its collocation obligations, a RBOC must have processes and procedures in place to ensure that all applicable collocation arrangements are available on terms and conditions that are "just, reasonable, and nondiscriminatory" in accordance with section 251(c)(6) and the FCC's implementing rules.[51] Data showing the quality of procedures for processing applications for collocation space, as well as, the timeliness and efficiency of provisioning collocation space and arrangements helps to evaluate a BOC's compliance with its collocation requirements.

In conclusion, to satisfy its obligations under this checklist item, a section 271 applicant must demonstrate that it provides competing carriers with interconnection that is equal-in-quality to the interconnection that it provides to its own retail operations, on rates and terms that are just, reasonable, and nondiscriminatory.

3. Summary of the Evidence Before PAPUC

a. Verizon PA

(1) Trunking

Verizon PA asserts that it provides interconnection trunking through interconnection agreements and Verizon PA's Wholesale Tariff, PA PUC 216.[52]

[50] See Second BellSouth Louisiana 271 Order at ¶ 66-73; BA NY 271 Order at ¶¶ 73-75, 78-80; SWBT Texas 271 Order at ¶¶ 73-75; SWBT Kansas and Oklahoma 271 Order at ¶¶ 228-231; Verizon MA 271 Order at ¶¶ 194-196.

[51] Id.

[52] Cklist Dec. at ¶ 40.

According to Verizon PA, CLECs order interconnection trunks from Verizon PA using the industry standard Access Service Request ("ASR") which can be electronically transmitted to Verizon PA using Connect Direct (previously referred to as Network Data Mover (NDM)), or by fax, if the CLEC has not yet implemented electronic systems.[53]

Verizon PA asserts that CLECs may interconnect with its network for the transport and termination of traffic in a variety of ways. In its 271 application,[54] Verizon PA states that it makes interconnection available at the line-side of the local switch; the trunk-side of a local switch; the trunk interconnection points for a tandem switch; central office cross-connect points; out of band signaling transfer points necessary to exchange traffic at these points and to access call-related databases;[55] and the points of access to unbundled network elements.[56]

Verizon PA further asserts that interconnection at technically feasible points other than those identified above in the Verizon PA network, as well as those specified in

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[53] Cklist Dec. at ¶ 48.

[54] Cklist Dec. at ¶ 32.

[55] Verizon PA provides interconnection to out-of-band Signaling Transfer Points ("STPs") of the Signaling System 7 ("SS7") such that stand-alone access to Verizon PA's STPs is available with or without Verizon PA-provided signaling link transport. In addition, Verizon PA will exchange Custom Local Area Signaling Services ("CLASS") related Transactional Capabilities Application Part ("TCAP") messages with CLECs to facilitate the interoperability of out-of-band signaling features and service between the carriers' end users. This allows a CLEC to offer call feature options including call set-up and CLASS services, as well as access to databases. CLECs may interconnect their switches to Verizon PA's STPs via Access Link ("A-Link") connections or they can interconnect their STPs to Verizon PA's STPs via Diagonal Link ("D-Link") connections, depending on the option that best meets their network needs. The manner in which Verizon PA provides CLECs with nondiscriminatory access to databases, specifically the 800 Database, Line Information Database ("LIDB"), the Local Number Portability ("LNP") database, and the Advanced Intelligent Network ("AIN"), is discussed in Checklist Item 10.

[56] Verizon PA asserts that it also provides CLECs with trunking to access E-911, Directory Assistance, and Operator Services. At the end of October 2000, Verizon PA had provided over 1100 E-911 trunks to 27 CLECs. Additionally, Verizon PA has provided approximately 1,100 dedicated trunks to facilities-based CLECs in conjunction with providing Directory Assistance and Operator Call Completion services. These arrangements are discussed in further detail in Checklist item 7.

individual interconnection agreements, are available upon request through a Bona Fide Request ("BFR") process.[57]

Additionally, Verizon PA asserts that it has established rates for local interconnection trunks in accordance with the PAPUC's MFS - Phase III Order at Docket Nos. A-310203F0002, A-310213F0002, A-310236F0002, and A-310258F0002, entered August 7, 1997.[58]

According to Verizon PA, its provisioning of local interconnection trunks is keeping pace with the rapid expansion in CLEC-provided service. Verizon PA reports that at the end of November 2000, it had approximately 324,000 local interconnection trunks in service with 37 CLECs.[59] By March 2001, that number had grown to approximately 362,000 local interconnection trunks with 41 CLECs.[60] Verizon PA asserts that this number of interconnection trunks means that the CLECs have nearly three-fourths as many interconnection trunks already in service as Verizon PA has in its entire local interoffice network.[61]

During 1999, Verizon PA reports that it doubled the number of interconnection trunks in service between its network and the networks of CLECs by adding more than

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[57] See Cklist Dec. at ¶ 33. BFR is provided for in Verizon PA interconnection agreements. The BFR process provides a CLEC the opportunity to request that Verizon PA deploy for the CLEC a capability or facility not normally available in Verizon PA's network. The process also allows Verizon PA to determine whether the request is technically feasible, and if so, the price, terms and conditions under which it can be offered. Verizon PA, however, has not received any BFRs associated with interconnection arrangements to date.

[58] Cklist Dec. at ¶ 44.

[59] Cklist Dec. at ¶ 41.

[60] Supp. Cklist Dec. at ¶ 15.

[61] Id.

99,500 interconnection trunks.[62] During 2000, Verizon PA added 137,000 interconnection trunks in service between its network and the networks of CLECs.[63] By the first quarter of 2001, Verizon PA states that it added 33,100 local interconnection trunks.[64] Of the approximate 362,000 interconnection trunks in service with CLECs in March 2001, about 64% are direct, end-office trunks, connecting 195 of Verizon PA's 198 host and stand-alone end offices directly to CLEC networks, and the other 36% are trunks between Verizon PA tandems and CLECs.[65]

Verizon PA asserts that the volume of interconnection traffic exchanged between itself and CLECs also more than doubled in 1999, with Verizon PA's local interconnection trunks carrying an average of over 1.0 billion minutes of traffic each month.[66] By the end of October 2000, the average number of minutes exchanged has risen further to 1.64 billion per month.[67] This volume increased nearly 70% in 2000, with Verizon PA's local interconnection trunks carrying an average of over 1.73 billion minutes of traffic each month.[68] By the end of February 2001, the average number of minutes exchanged has risen to 2.18 billion per month.[69]

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[62] Supp. Cklist Dec. at ¶ 18. To accomplish this, Verizon PA explained that it expanded the trunk capacity of its switches by approximately 27,000 tandem trunk terminations and by approximately 200,000 end-office trunk terminations. See Cklist Dec. at ¶ 42.

[63] Supp. Cklist Dec. at ¶ 18.

[64] Id.

[65] Id.

[66] Cklist Dec. at ¶ 43.

[67] Id.

[68] Supp. Cklist Dec. at ¶ 19.

[69] Id.

In addition to providing traditional 56 Kbps interconnection trunks, Verizon PA also provides CLECs with 64 Kbps Clear Channel interconnection trunks.[70] Verizon PA also makes available two-way measured-use trunking for CLECs that want this option in Pennsylvania.[71] These trunks are available pursuant to negotiated interconnection agreements.[72] Currently, Verizon PA has seven interconnection agreements that include the provision of measured, two-way interconnection trunking.[73] At the end of March 2001, Verizon PA had 2,741 two-way, measured trunks in service with CLECs.[74]

Verizon PA asserts that it uses standard intervals when provisioning interconnection trunks for CLECs.[75] In Pennsylvania, Verizon PA tracks CLEC trunk order performance based on a grouping of trunk orders into six different categories, which is based on whether the trunk request is associated with a forecast, as well as the size and complexity of the trunk request.[76]

Verizon PA states that it provides Firm Order Confirmations ("FOCs") for trunk orders on a timely basis and is consistently installing interconnection trunks that meet or exceed the provisioning measurement intervals for interconnection trunks in each of the six categories.[77] Verizon PA further asserts that these intervals also compare favorably to

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[70] Cklist Dec. at ¶ 38.

[71] Id. at ¶ 37.

[72] Id., see also Cklist Dec. Att. 202.

[73] Supp. Cklist Dec. at ¶ 17.

[74] Id.

[75] See Cklist Dec. at ¶ 45. Verizon PA explains that these intervals are the same as those established for ASRs that Verizon PA uses in provisioning network trunking arrangements for interexchange carriers.

[76] Id. at ¶ 46.

[77] Supp. Cklist Dec. Revised Att. 204 (Verizon PA's performance in providing timely FOCs and reasonable installation intervals, in accordance with this six category measurement approach, for CLEC-ordered local interconnection trunks is shown in Att. 204).

the intervals that Verizon PA offers IXCs for Feature Group D Switched Access trunks, both for smaller orders (forecasted additions of 192 trunks or less), and for larger (>192 trunks) and more complex orders, as well as for orders that were not forecasted.[78]

Verizon PA asserts that over the entire period of May through November 2000, the C2C performance data show that Verizon PA met 92.8% of its appointments for provisioning CLEC interconnection trunks.[79] In addition, Verizon PA reports that over the entire period from July 2000 through February 2001, the C2C performance data show that it met 93.8% of its appointments for provisioning CLEC interconnection trunks, with performance at 97.7% in the commercial availability period.

Verizon PA further asserts that the interconnection it provides to CLECs is technically identical to the interconnection that it provides between the switches in its local network.[80] Verizon PA states that it uses the same equipment, and in some cases shares exactly the same facilities, for CLEC and Verizon PA local traffic. Verizon PA also states that it maintains and repairs interconnection trunks in a nondiscriminatory manner by using the same equipment and personnel for CLEC and Verizon PA trunks.[81] Verizon PA states that the most recent C2C performance reports indicate that trouble reports for interconnection trunks were virtually nonexistent.[82]

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[78] Supp. Cklist Dec. at ¶ 21.

[79] See Meas. Dec. Att. 402. Verizon PA explained that had it not been for the work stoppage in August and September 2000, it would have met 95.8% of its appointments for provisioning CLEC interconnection trunks.

[80] Cklist Dec. at ¶ 53.

[81] Id.

[82] Meas. Dec. Att. 403.

Verizon PA asserts that it designs interconnection trunks to CLECs using the same technical criteria it uses to design its own facilities.[83] Verizon PA states that it consistently provides CLECs as a group with a higher grade of service for calls from Verizon PA subscribers to CLEC end-users than it does for calls among Verizon PA subscribers. Verizon PA reports that there has been a relatively low level of final trunk blocking for either CLECs or Verizon PA.[84] Verizon PA further asserts that when it is compared to each CLEC individually, the data indicates that the vast majority of CLECs experience a far better record operating below the trunk group engineering design on the CLEC-dedicated final trunk groups than Verizon PA experiences on its own common final trunks.[85] Verizon PA reports that 29 of 30 CLECs had fewer final trunk groups operating over the engineering design in May 2000 than Verizon PA.[86] However, Verizon PA asserts that this measurement (trunk group quantities "over" and "under" the engineering design) is not an adequate indicator of the quality of interconnection Verizon PA provides the CLECs.[87]

Verizon PA conducted "trunk utilization" traffic studies, which it asserts provide a more accurate comparison of final trunking blocking for CLECs and Verizon PA.[88] Verizon PA presented such data for three periods. For the period of May through November 2000, the average utilization ratio ("trunks required" divided by "trunks in service") was 41.9% for CLEC-dedicated final trunk groups and 61.4% for Verizon PA's own common final trunks groups.[89] Additionally, from May 2000 through February

[83] Cklist Dec. at ¶¶ 54-55.

[84] Meas. Dec. Att. 402.

[85] Supp. Cklist Dec. at ¶¶ 41-43.

[86] Id. at ¶ 41; Supp. Cklist Dec. Revised Att. 205.

[87] Cklist Dec. at ¶¶ 59-60.

[88] Id. at ¶ 61.

[89] Cklist Dec. at ¶ 62.

2001, the average utilization ratio was 44% for CLEC-dedicated final trunk groups and 62% for Verizon PA's own common final trunk groups.[90] Lastly, for the months of January and February 2001, this average utilization ratio was 50.4% for CLECs and 64% for Verizon PA common final trunk groups.[91]

(2) Collocation Arrangements

Verizon PA asserts that it provides CLECs with several types of physical collocation,[92] virtual collocation[93] and other collocation alternatives,[94] in compliance with its responsibilities under TA-96 and in accordance with the requirements of the FCC's Advanced Services Order.[95] These multiple collocation offerings are available to CLECs under Verizon PA's PA PUC Tariff 218 and in interconnection agreements.[96]

Verizon PA's 218 tariff contains the rates and charges that apply to the multiple collocation offerings and alternatives available to CLECs in Pennsylvania. The rates and charges contained in this tariff include standard rates and charges for various elements including application fees, cage construction, space conditioning, and floor space.[97] Verizon PA recently filed a proposed tariff supplement reflecting rates for physical and

[90] Supp. Cklist Dec. at ¶ 39.

[91] See Supp. Cklist Dec. Att. 243.

[92] Cklist Dec. at ¶¶ 70-71.

[93] Cklist Dec. at ¶ 72.

[94] Cklist Dec. at ¶¶ 73-78.

[95] Advanced Services Order.

[96] Cklist Dec. at ¶ 69.

[97] Cklist Dec. at ¶ 104.

virtual collocation that had been agreed to pursuant to a settlement agreement entered at Docket Nos. R-00994697 and R-00994697C0001.[98]

According to Verizon PA, it has developed and implemented comprehensive methods for ordering collocation arrangements as well as procedures to ensure that it provides CLECs with quality collocation arrangements.[99] Verizon PA asserts that it has the adequate support staff to accommodate the CLECs' increasing demand for both physical and virtual collocation arrangements.[100] Verizon PA reports that in 1998, it provided 12 carriers with 44 physical collocation arrangements (traditional caged, SCOPE and CCOE) and eight carriers with 37 virtual collocation arrangements.[101] In 1999, Verizon PA provided 22 carriers with 479 physical collocation arrangements and six carriers with 24 virtual collocation arrangements.[102] From January 2000 through March 2001, Verizon PA asserts that it provided 44 carriers with 1,048 physical collocation arrangements and four carriers with 14 virtual collocation arrangements.[103]

Verizon PA reports that through November 2000, CLECs had access to 85.7% of Verizon PA's residential access lines and 91.8% of Verizon PA's business access lines through 1,798 collocation arrangements in place and pending in 201 central offices.[104] Additionally, through March 2001, CLECs had access to 85.3% of Verizon PA's

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[98] Joint Petition for Approval of Settlement Agreement Addressing Collocation Rates, Terms and Conditions, Pa. PUC, Rhythms Links Inc. v. Bell Atlantic-Pennsylvania, Inc., Docket Nos. R-00994697 and R-00994697C0001 (entered March 22, 2001) ("Pa. PUC, et al. v. BA-PA.").

[99] Cklist Dec. at ¶¶ 92-103.

[100] Id. at ¶ 80.

[101] Id. at ¶ 79.

[102] Id.

[103] Supp. Cklist Dec. at ¶ 45.

[104] Cklist Dec. at ¶ 81.

residential access lines and 93.1% of Verizon PA's business access lines through 1,796 collocation arrangements in place and pending in 201 central offices.[105]

Additionally, Verizon PA asserts that there is a "regular exchange of information [that] occurs between Verizon PA and the CLECs" when providing collocation arrangements.[106] For example, for the period through November 2000, Verizon PA alleges that 98.15% of the 1,748 acknowledgement letters were sent to the CLECs within the first five business days after receiving the applications.[107] Moreover, for the first three months of 2001, Verizon PA asserts that 96.34% of the 82 acknowledgement letters were sent to the CLECs within five business days of receiving the application.[108]

Verizon PA states that it also meets the measured milestones required in the Global Order.[109] Verizon PA asserts that of the 1,767 letters Verizon PA sent to CLECs in the first 11 months of 2000, 1,757 (99.43%) were sent to CLECs within ten business days.[110]

Verizon PA further asserts that it provides physical collocation arrangements on a timely basis. Verizon PA reports that from December 1999 through November 2000, 876

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[105] Supp. Cklist Dec. at ¶ 46.

[106] See Cklist Dec. at ¶ 83.

[107] Id.

[108] Supp. Cklist Dec. at ¶ 47.

[109] See Cklist Dec. at ¶ 82. (As required by the Global Order, Verizon PA must send a letter to the CLEC within ten business days after receiving its complete collocation application form. The schedule letter formally notifies the CLEC about the collocation arrangement that Verizon PA will provide based on the type of collocation the CLEC has requested, the date by which Verizon PA will complete the CLEC's collocation arrangement, and a cost estimate for the type of collocation that the CLEC has requested or, in the alternative, that Verizon PA can provide to the CLEC. The letter also contains the names and telephone numbers of the Verizon PA Collocation Manager responsible for preparing schedule letters, Collocation Project Manager, and Local Collocation Coordinator.

[110] Cklist Dec. at ¶ 102.

of the 945 physical collocation arrangements (92.70%) it had provided to CLECs were completed on time.[111] Additionally, Verizon PA asserts that of the 108 physical collocation arrangements that it had provided to CLECs in the first three months of 2001, all 108 were completed on time.[112]

Verizon PA also asserts that it is prepared to provide virtual collocation arrangements to CLECs upon request in a standard interval of 60 business days.[113] Verizon PA presented evidence that of the nine virtual collocation arrangements that it provided to CLECs from December 1999 through November 2000, all nine (100%) were completed on time.[114] Additionally, for the period of January through March 2001, Verizon PA asserts that all of the ten virtual collocation arrangements it provided to CLECs were completed on time.[115]

Verizon PA states that, on its own initiative, it has reconfigured its own equipment space, relocated administrative personnel and functions, removed power and frame equipment, and redesigned storage areas solely to accommodate CLEC requests for physical collocation arrangements. Verizon PA asserts that it has removed obsolete, unused equipment or "abandoned in place" equipment for the sole purpose of creating additional physical collocation space for CLECs.[116]

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[111] Id. at ¶ 84.

[112] See Cklist Dec. Att. 234

[113] See Cklist Dec. at ¶ 85 (Verizon PA explains the processes and procedures for creating a virtual collocation arrangement).

[114] Id.

[115] Id.

[116] Cklist Dec. at ¶¶ 86-87.

Verizon PA asserts that its collocation website provides CLECs with information on the availability of collocation space in its central offices.[117] Verizon PA also asserts that it provides CLECs with opportunities to tour its central offices in accordance with FCC rules.[118] Verizon PA provided four tours of Verizon PA central offices in 1999 and 17 in the first 11 months of 2000.[119]

Verizon PA states that the space exhaustion notifications its files with the PAPUC contain more detailed information than required by the FCC, as described in its Advanced Services Order at ¶ 56 and Reconsideration Order at ¶ 61.[120]

b. Covad

Covad argues that Verizon PA does not meet this checklist item because of its practice of charging for DC power in collocation arrangements. Covad asserts that Verizon PA's method of charging for backup power is not based upon the cost of providing the service, as TA-96 requires. 47 U.S.C. § 252 (d)(1)(A).[121] Covad alleges that Verizon PA is double charging for collocation power.[122] Specifically, Covad asserts that Verizon PA's rate structure charged Covad for 80 amps when it ordered only 40.[123]

In response, Verizon PA asserts that it has worked cooperatively with the CLECs, ultimately agreeing to charge CLECs for the number of load amps actually ordered.

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[117] Id. at ¶ 88.

[118] Id. at ¶ 89; see also Advanced Services Order at ¶ 57.

[119] Id. at ¶ 90.

[120] Id. at ¶ 91.

[121] Covad Dec. at ¶ 85.

[122] Covad Dec. at ¶ 82.

[123] Id.

Verizon PA filed the required tariff amendments on April 2, 2001. Additionally, Verizon PA issued an industry letter clarifying how the CLECs should order DC power.[124] Therefore, this is no longer an issue.

c. Conectiv

Conectiv asserts that Verizon PA has consistently failed to meet scheduled due dates for the provisioning of collocation arrangements and unilaterally changed its requirement for installation of equipment at collocation sites. Conectiv asserts that Verizon PA has failed to demonstrate that it provides CLECs with nondiscriminatory physical and virtual collocation arrangements that are just and reasonable and in accordance with the requirements of the PAPUC and the FCC.[125]

Conectiv states that it requested a substantial number of collocation arrangements for Pennsylvania between January 1999 and December 2000. Conectiv states that Verizon PA did not fully complete many of the collocation arrangements within the time period required by the PAPUC's Global Order and the FCC.[126] According to Conectiv, this resulted in a delay in Conectiv placing its equipment in the space and a delay in providing service to its customers in those markets.[127]

Additionally, Conectiv states that Verizon PA's collocation process is inherently problematic and can lead to significant delays or other difficulties to a competitor accessing collocation arrangements. Conectiv explains that Verizon PA's ability to delay a competitor's access to appropriate collocation arrangements starts before the PAPUC-

[124] See Supp. Cklist Dec. Att. 235.

[125] See Conectiv 02/12/01 Comments, Affid. of Emma Richmond.

[126] Id..

[127] Conectiv 02/12/01 Comments at 7.

ordered provisioning intervals can begin since Verizon PA has unilateral control over when an application is deemed "complete." Conectiv asserts that until Verizon PA has determined that an application is "complete," Verizon PA has no obligation to respond to the requesting CLEC as to the availability of collocation space and does not have to begin preparing the requested collocation arrangement. According to Conectiv, by simply claiming that an application is incomplete, Verizon PA can delay the commencement of the PAPUC-mandated provisioning intervals by requesting additional and even unnecessary information from the requesting CLEC.[128]

Further, Conectiv asserted that Verizon PA failed to meet required or agreed upon dates for walk throughs, completion of punchlist items[129] and responding to Conectiv's request for information. Conectiv stated that Verizon PA often failed to schedule a tour of a central office it had previously claimed had no space for additional collocation arrangements. Lastly, Conectiv echoes the concerns of Covad concerning Verizon PA's manner of charging for collocation power.[130] However, as mentioned earlier, Verizon PA's tariff filing has resolved the collocation DC power issue.

d. Winstar

Winstar alleged that Verizon PA fails to provide adequate FOCs. Additionally, Winstar argued that Verizon PA routinely provisions interconnection trunks late and also excludes untimely provisioning of interconnection trunks from the relevant performance metrics. Winstar also alleged that it has experienced significant problems in regards to

[128] Id.

[129] A list prepared by the CLEC after it inspects its collocation arrangements of things that need to be completed in order for the CLEC to accept the collocation arrangement.

[130] See Affidavit of Emma Richmond at 2-4.

Verizon PA's maintenance and repair of interconnection trunks, including the number of outages and their duration.

Verizon PA has had an opportunity to fully respond to Winstar's allegations. In response, Verizon PA asserts the FOCs provide the due date when the order will be worked or provisioned. Additionally, Verizon PA asserts that a CLEC is informed well in advance of the installation due date if Verizon PA will only be able to install a portion of the interconnection trunks requested. Verizon PA explains when such an incident occurs, it creates and processes a service order for the portion of the request that can be provided from the outset. Verizon PA then sends a FOC to the CLEC confirming the trunk delivery date for the portion of the CLEC's trunk request that can be provided.[131]

Verizon PA asserts that it uses a long-standing, industry-standard format for trunking orders. Verizon PA states that many of Winstar's claims did not concern interconnection trunking issues, but were related to special access.[132]

Verizon PA asserts that erroneous record keeping on Winstar's behalf was responsible for Winstar's allegations that Verizon PA delivered interconnection trunks in an untimely manner. Verizon PA explained that of the 15 purchase order numbers ("PONs") identified by Winstar, eight were cancellation orders and two were never received by Verizon PA for processing. Regarding the five remaining PONs, Verizon PA explains that for three of the orders, Winstar was not ready to "test and turn up" with Verizon PA on the original due dates. Thus, the three orders were marked as "customer

[131] Supp. Cklist Dec. at ¶¶ 24-25.

[132] Id. at ¶¶ 26-27; see also 03/01/01 Tr. at 352-55.

not ready."[133] On the two remaining orders, Verizon PA reports that it provisioned those trunks in an average of 10 business days.[134]

Lastly, concerning Winstar's claims about trunk maintenance and repair, Verizon PA states that Winstar's actual interconnection trunk service record indicates that Winstar had not filed any trouble tickets alleging Pennsylvania interconnection trunk service outages.[135] After filing comments, participating in technical conferences, and being subject to Verizon PA discovery, Winstar withdrew from this proceeding on April 5, 2001.

e. MCIW

MCIW alleges that its experience negotiating interconnection agreements with Verizon PA demonstrates that Verizon PA has violated its obligation to permit competing carriers to select interconnection points ("IPs"). MCIW asserts that in negotiations, Verizon PA presents an interconnection proposal to CLECs referred to as GRIPS ("geographically relevant interconnection points"). Essentially, Verizon PA seeks to have the CLEC physically interconnect at geographically relevant points on its network based on traffic flow and Verizon PA's network.

In response, Verizon PA asserts that the number and location of interconnection points are important in determining how carriers share the costs of building interconnection and transport facilities needed to carry traffic between their networks. [136]

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[133] Supp. Cklist Dec. at ¶ 28.

[134] Id.; Supp. Cklist Dec. Att. 232.

[135] Supp. Cklist Dec. at ¶ 36, see also 03/01/01 Tr. at 271.

[136] The crux of the issue, however, seems to resolve around the fact that Verizon PA makes a distinction between the "Point of Interconnection" (POI) and the IP. The POI is the point where the networks physically interconnect. The IP is a point where traffic is dropped off for billing purposes. Essentially,

Moreover, Verizon PA claims that there are several agreements without any version of GRIPs that are available for carriers to opt-in.[137]

f. Sprint

Sprint argues that Verizon PA has failed to show that it is providing interconnection to requesting carriers in a just, reasonable, and nondiscriminatory manner. Sprint alleges that Verizon PA's collocation offering in Pennsylvania is not in accordance with the requirements under the Act.[138]

Sprint argues that Verizon PA fails to remove obsolete and unused equipment so as to increase the amount of space available for physical collocation. Sprint asserts that in touring at least one central office in Pennsylvania, only virtual collocation is permitted in areas where obsolete and unused equipment would have been retired.[139] Sprint further asserts that Verizon PA doe not explain its process for deciding that a central office is closed for collocation.

Sprint alleges that Verizon PA's exemption filing and a CLEC's access to floor plans and diagrams have caused unworkable situations for CLECs seeking to determine whether Verizon PA's assertions regarding space exhaustion for a particular central office are valid.[140]

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using IP permits Verizon PA to deliver traffic originating on its network to the IP, which is usually its end office of tandem, and then the CLEC must carry the traffic to its POI. See Sprint's Resp. to In-Hearing Data Req. No. 3.

[137] See Verizon PA Resp. to In-Hearing Data Req. 66.

[138] The PAPUC is addressing many of these unresolved issues at Docket Nos. R-00994697 and R-00994697C0001.

[139] See 03/02/01 Tr. at 159, 169.

[140] See 03/02/01 Tr. at 181.

Additionally, Sprint alleges that Verizon PA does not provide connecting facility assignments to Sprint prior to when a collocation arrangement is ready. Thus, Sprint has to pay monthly recurring charges for collocation arrangements that it can not use.[141] Lastly, Sprint echoes the arguments of Covad and MCIW.[142]

4. Discussion

a. Interconnection

Based upon our review of the record in this case and prior section 271 orders, we are persuaded that Verizon PA provides equal-in-quality interconnection on terms and conditions that are just and reasonable in accordance with the requirements of section 251(c)(2) and 252(d)(1), as specified in section 271.

Similar to the BOCs in New York, Texas, Kansas and Oklahoma, and Massachusetts, Verizon PA makes interconnection available through interconnection agreements and through its tariff. Likewise, Verizon PA receives orders for interconnection trunks through the ASR process, which it accepts electronically or by fax. More importantly, Verizon PA has provided data to demonstrate that it is providing nondiscriminatory interconnection trunking service to competing carriers.

Verizon PA's data demonstrates it designs its interconnection facilities to meet "the same technical criteria and service standards" that are used for the interoffice trunks

[141] Sprint noted that it was working cooperatively with Verizon PA to resolve this issue but had not yet come to a firm commitment.

[142] See Sprint 04/18/01 Comments at 14-20.